

50 CFR Part 17**Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for *Arenaria cumberlandensis***

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines *Arenaria cumberlandensis* (Cumberland sandwort) to be an endangered species under authority of the Endangered Species Act of 1973 (Act), as amended. This small plant is known from only five sites, one in Kentucky and four in Tennessee. The species is endangered by timber harvesting, trampling by recreational users of its unique habitat, and destruction of its habitat by collectors of Indian artifacts. This action

will implement the Federal protection provided by the Act for *Arenaria cumberlandensis*.

EFFECTIVE DATE: June 23, 1988.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801.

FURTHER INFORMATION CONTACT: Mr. Robert R. Currie at the above address (telephone 704/259-0321 or FTS 672-0321).

SUPPLEMENTARY INFORMATION:

Background

Arenaria cumberlandensis (Cumberland sandwort) was described as a new species by Wofford and Kral (1979). This perennial, herbaceous member of the Pink family (Caryophyllaceae) is 4 to 6 inches (10 to 15 centimeters) tall and has small, white-petaled flowers and relatively long, narrow leaves. It is distinguished from a related species, *Arenaria glabra*, by the presence, at flowering, of basal rosettes of leaves and by its wider and

thicker leaves. Additionally, *Arenaria cumberlandensis* flowers in late June and early July, while *Arenaria glabra* flowers in late April and early May (Wofford and Smith 1980).

Arenaria cumberlandensis is known only from a limited portion of the Cumberland Plateau in north-central Tennessee and adjacent Kentucky. It is restricted to shady, moist rockhouse floors, overhanging ledges, and solution pockets in sandstone rock faces. Rockhouses were defined by Wofford (1976) as "cave-like overhangs resulting from differential weathering of sandstone." This species occurs where the correct combination of shade, high moisture, cool temperatures, and high humidity provides appropriate habitat conditions. These habitat requirements are in sharp contrast to those of other members of the genus in the southeastern United States, which are typically found in hot, dry areas in full sun (Wofford and Kral 1979, Wofford and Smith 1980). The five currently known populations of *A. cumberlandensis*, one in Kentucky and four in Tennessee, are described below.

1. *McCreary County, Kentucky*. This small population, which is about 1 mile from the Tennessee State line, is the only known population in the State. It was discovered by Mr. Max Medley during a thorough search of the area for rare plants. The area is managed by the Daniel Boone National Forest. Threats to the site include habitat destruction by collectors of Indian artifacts, hikers, campers, and other recreational users of the area. Timber removal in or adjacent to the habitat supporting the species would also have significant adverse impacts on the population by eliminating the shade, high moisture and humidity, and cool temperatures which *Arenaria cumberlandensis* requires. At the present time no timber harvests are planned near this site (Brian Knowles, Daniel Boone National Forest, personal communication, (1986)).

2. *Fentress and Morgan Counties, Tennessee*. This small population is located on privately and publicly owned land on the east and west sides of Clear Fork River. At this point the river forms a part of the boundary between Fentress and Morgan Counties. The Fentress County portion of the population is managed by the National Park Service as a part of the Big South Fork National River and Recreation Area. The Fentress County population segment is under stress because it occurs in an area that is much drier than the habitat in which *A. cumberlandensis* is characteristically found. This was the driest site observed by Wofford and Smith (1980) during their status survey of the species. The privately owned Morgan County part of this population occurs in the shaded, moist habitat more typical of the species. All of the plants are potentially threatened by trampling by hikers, campers, and Indian artifact collectors, and adverse habitat modification by timber harvesting.

3. *Pickett County, Tennessee*. This site, located within Pickett State Park and Forest, is owned by the State of Tennessee and is managed by the Tennessee Department of Conservation, Division of Forestry. The area supports the largest population of *Arenaria cumberlandensis* as well as several excellent examples of the unique rockhouse flora found only on the Cumberland Plateau. Existing threats to the species at this site include hiking, camping, picnicking, rappelling, and other recreational use of the area. A potential threat to the population is any timber removal that is not planned with the conservation of Cumberland sandwort as a primary consideration.

4. *Fentress County, Tennessee*. This very small population contains less than

six clumps of plants and is located within the watershed of a municipally owned water supply reservoir. At the present time, the only known threat is this population's small size and its consequent vulnerability to extirpation by natural population level fluctuations (Wofford and Smith 1980).

5. *Scott County, Tennessee*. This small population is within the boundaries of the Big South Fork National River and Recreation Area and is managed by the National Park Service. The population is small, consisting of approximately 50 clumps. The site has been severely impacted by trampling by recreational visitors to the area, by collectors of Indian artifacts, and by trash dumping (Wofford and Smith 1980).

The Service funded a status survey of *A. cumberlandensis* in 1979 and received the final report in October 1980. Based on this report, the species was included in category 1 of a comprehensive plant notice of review in the Federal Register of December 15, 1980 (45 FR 82480), and in an updated notice in the Federal Register of September 27, 1985 (50 FR 39526). Category 1 comprises those species for which the Service has current information supporting proposed endangered or threatened status.

All plants covered by the comprehensive plant notices, such as *A. cumberlandensis*, are treated as being under petition. Section 4(b)(3)(B) of the Endangered Species Act of 1973, as amended in 1982, requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 Amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. On October 13, 1983; October 12, 1984; and October 11, 1985; the Service found that the petitioned listing of *Arenaria cumberlandensis* was warranted but precluded by other listing actions of a higher priority and that additional data on vulnerability and threats were still being gathered.

On July 6, 1987, the Service published, in the Federal Register (52 FR 25268), a proposal to list *Arenaria cumberlandensis* as an endangered species. That proposal constituted the final 1-year finding as required by the 1982 Amendments to the Endangered Species Act. The proposal provided information on the species' biology, status, and threats, and the potential implications of listing. The proposal also solicited comments on the status, distribution, and threats to the species.

Summary of Comments and Recommendations

In the July 5, 1987, proposed rule and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices inviting public comment were published in late July 1987 in the *Fentress Courier* (Jamestown, Tennessee), *Morgan County News* (Warburg, Tennessee), *Pickett County Press* (Byrdstown, Tennessee), *Independent Herald* (Oneida, Tennessee), and *McCreary County Record* (Whitley City, Kentucky). The Service received 14 comments on the proposed rule. All comments received through October 5, 1987, were considered in developing this final rule and are discussed below.

Of the 14 responses to the proposed rule, four were from Federal agencies, six from State or local agencies, and four from private organizations or individuals. Support for the proposed addition of *Arenaria cumberlandensis* to the Federal list of endangered species was expressed by nine comments. Additional information on the species or on the impacts of the proposed protection of this species on specific agencies or programs was provided in three comments. Two comments were nonsubstantive in nature. No objections to the proposed protection of *Arenaria cumberlandensis* were received.

The Service has incorporated the additional information received on this species into the final rule. The Service concurs with the conclusion reached by nine reviewers that *Arenaria cumberlandensis* merits listing as an endangered species under the Act.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Arenaria cumberlandensis* should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to

Arenaria cumberlandensis Wofford and Kral (Cumberland sandwort) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* *Arenaria cumberlandensis* is endangered directly and indirectly by human activities in and adjacent to its unique habitat. The species is found on the sandy floors of rockhouses, in solution pockets on the face of sandstone cliffs, and on ledges beneath overhanging sandstone. Significant threats to the plants growing on the rockhouse floors include trampling by hikers, campers, picnickers, individuals rappelling down the sandstone cliffs, and "pot hunters" digging within the rockhouses for American Indian artifacts. The plants growing on ledges and in solution pockets on the cliff faces are vulnerable to trampling by those rappelling down the cliffs. Most populations are potentially threatened by timber removal in or adjacent to the sites supporting the species. Increased sunlight on the plants and subsequent alteration of the moisture conditions would probably lead to extirpation of *Arenaria cumberlandensis* from the timbered area.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* *Arenaria cumberlandensis* is not currently a component of the commercial trade in native plants. Its small size and restrictive habitat requirements should limit future demands resulting from increased publicity of the species to a few wild flower enthusiasts specializing in rare species. Several of the known populations are very small and could be significantly damaged or extirpated by scientific collecting. The adverse impacts of some recreational activities have been addressed in the preceding section.

C. *Disease or predation.* Disease and predation are not known to be factors affecting the continued existence of Cumberland sandwort at this time.

D. *The inadequacy of existing regulatory mechanisms.* *Arenaria cumberlandensis* is listed as an endangered species on Tennessee's list of endangered, threatened, and rare plant species. The Tennessee Rare Plant Protection and Conservation Act prohibits taking without the permission of the landowner and requires that any commercial activity in the species be authorized by permit. The species is listed as endangered on Kentucky's unofficial list of endangered, threatened, and rare species prepared by a review committee of the Kentucky Academy of Science. No protection is afforded the

species by inclusion on this unofficial list. Existing regulatory mechanisms and unofficial recognition given to the species do not provide protection from habitat alteration and destruction which are the primary threats to the continued existence of *Arenaria cumberlandensis*.

E. *Other natural or manmade factors affecting its continued existence.* *Arenaria cumberlandensis* is an extremely rare species found only within a small portion of the Cumberland Plateau. In some populations, loss of even a few individuals through natural fluctuations in numbers or human-induced habitat alterations could eliminate the population and thereby appreciably reduce the likelihood that the species will continue to exist.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Arenaria cumberlandensis* as an endangered species. Endangered status seems appropriate because of the severity of the threats facing the species throughout its range. Critical habitat is not being designated for the reasons discussed below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for *A. cumberlandensis* at this time. Most populations of this species are very small, and loss of even a few individuals to activities such as collection for scientific purposes could extirpate the species from some locations. Collecting, without permits, will be prohibited at the locations under Federal management; however, taking restrictions will be difficult to enforce at these sites and will not be applicable to the other non-federally owned locations. Therefore, publication of critical habitat descriptions and maps would increase the vulnerability of the species without significantly increasing protection. The owners and managers of all the known populations of *Arenaria cumberlandensis* are aware of the plant's location and of the importance of protecting the plant and its habitat. No additional benefits would result from a determination of critical habitat. Therefore, it is not prudent to designate critical habitat for *Arenaria cumberlandensis* at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(4) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. Three of the five known populations of *Arenaria cumberlandensis* are partially or completely on privately, municipally, or State-owned land. One small population and part of another population are located on land managed by the National Park Service, while another is on land managed by the U.S. Forest Service. There are no current or planned Federal activities that are anticipated to adversely impact this species.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale this species in interstate or foreign commerce, or to remove and reduce to

possession the species from areas under Federal jurisdiction. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. It is anticipated that few trade permits will be sought or issued, since *Arenaria cumberlandensis* is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 27329, Central Station, Washington, DC 20038-7329 (202/343-4955).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the endangered Species Act of 1973, as

amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

- Tennessee Department of Conservation. 1979. Summary Status Report—*Arenaria cumberlandensis*. Unpublished report. 1 p.
 Wofford, B.E. 1976. The Taxonomic Status of *Ageratina luciae-brauniae* (Fern.) King and H. Robins. *Phytologia* 33(6): 369-370.
 Wofford, B.E., and D.K. Smith. 1980. Status Report on *Arenaria cumberlandensis*. Unpublished report prepared under contract to the Southeast Region, U.S. Fish and Wildlife Service. 22 pp.
 Wofford, B.E., and R. Kral. 1979. A new *Arenaria* (Caryophyllaceae) from the Cumberlands of Tennessee. *Brittonia* 31(2):257-260.

Author

The primary author of this final rule is Mr. Robert R. Currie, Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801 (704/259-0321 or FTS 672-0321).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 684; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 98-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99-625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family Caryophyllaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

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Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Caryophyllaceae—Pink family:						
Arenaria cumberlandensis.....	Cumberland sandwort.....	U.S.A. (KY, TN)	E	311	NA	NA

Dated: June 3, 1988.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks

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